CLAIMS

1. A resin-molded chip solid electrolyte capacitor comprising a plurality of solid electrolyte capacitor elements horizontally laid in parallel with no gap on a pair of oppositely disposed end parts of a lead frame, and a fixing layer which is extending across the plurality of capacitor elements and fixing the capacitor elements with each other.

2. The chip solid electrolyte capacitor as claimed in claim 1, wherein the solid electrolyte capacitor element is produced by stacking an oxide dielectric film layer, a semiconductor layer and an electrically conducting layer in this order to form a cathode part on a surface exclusive of the anode part at one end of an anode substrate comprising a sintered body of a valve-acting metal or an electrically conducting oxide or comprising the sintered body connected with a metal wire, and the anode part and the cathode part each is laid to come into contact with the end part of the lead frame.

3. The chip solid electrolyte capacitor as claimed in claim 1, wherein the fixing layer is a resin layer or an electrically conducting layer.

4. The chip solid electrolyte capacitor as claimed in claim 2, wherein the anode part comprises a distal end

of the anode substrate.

5. The chip solid electrolyte capacitor as claimed in claim 2, wherein the anode part comprises a metal wire or foil connected to the sintered body.

6. The chip solid electrolyte capacitor as claimed in claim 5, wherein the metal wire is selected from tantalum, niobium, aluminum, titanium, alloys mainly comprising such a metal, and these metals and alloys which are partially oxidized and/or nitrided.

7. The chip solid electrolyte capacitor as claimed in claim 2, wherein the valve-acting metal or electrically conducting oxide is tantalum, aluminum, niobium, titanium, an alloy mainly comprising such a valve-acting metal or niobium oxide, or a mixture of two or more members selected from these valve-acting metals, alloys and electrically conducting oxides.

8. The chip solid electrolyte capacitor as claimed in claim 7, wherein the valve-acting metal, alloy or electrically conducting oxide is subjected to at least one treatment selected from carbidation, phosphation, boronation, nitridation and sulfidation.

9. The chip solid electrolyte capacitor as claimed in claim 2, wherein the sintered body has a chemically

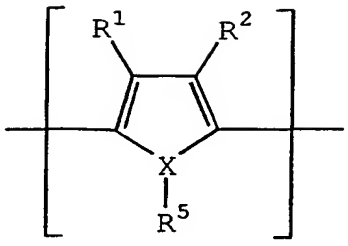
and/or electrically etched surface.

10. The chip solid electrolyte capacitor as claimed in claim 2, wherein the boundary between the anode part and the part exclusive of the anode part of the anode substrate is insulated by an insulating resin.

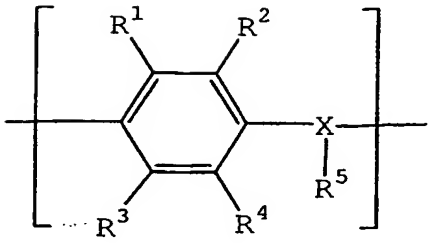
11. The chip solid electrolyte capacitor as claimed in claim 2, wherein the oxide dielectric layer mainly comprises at least one member selected from Ta_2O_5, Al_2O_3, TiO_2 and Nb_2O_5.

12. The chip solid electrolyte capacitor as claimed in claim 2, wherein the semiconductor layer is at least one member selected from an organic semiconductor layer and an inorganic semiconductor layer.

13. The chip solid electrolyte capacitor as claimed in claim 12, wherein the organic semiconductor is at least one member selected from an organic semiconductor comprising benzopyrroline tetramer and chloranil, an organic semiconductor mainly comprising tetrathiotetracene, an organic semiconductor mainly comprising tetracyano-quinodimethane, and an organic semiconductor mainly comprising an electrically conducting polymer obtained by doping a dopant to a polymer containing a repeating unit represented by the following formula (1) or (2):



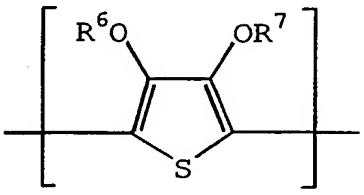
(1)



(2)

wherein R^1 to R^4 each independently represents a hydrogen atom, an alkyl group having from 1 to 6 carbon atoms or an alkoxy group having from 1 to 6 carbon atoms, X represents an oxygen atom, a sulfur atom or a nitrogen atom, R^5 is present only when X is a nitrogen atom, and represents a hydrogen atom or an alkyl group having from 1 to 6 carbon atoms, and each of the pairs of R^1 and R^2, and R^3 and R^4 may combine with each other to form a cyclic structure.

14. The chip solid electrolyte capacitor as claimed in claim 13, wherein the electrically conducting polymer containing a repeating unit represented by formula (1) is an electrically conducting polymer containing a structure unit represented by the following formula (3) as a repeating unit:



(3)

wherein R^6 and R^7 each independently represents a hydrogen atom, a linear or branched, saturated or unsaturated alkyl

group having from 1 to 6 carbon atoms, or a substituent for forming at least one 5-, 6- or 7-membered saturated hydrocarbon cyclic structure containing two oxygen atoms when the alkyl groups are combined with each other at an arbitrary position, and the cyclic structure includes a structure having a vinylene bond which may be substituted, and a phenylene structure which may be substituted.

15. The chip solid electrolyte capacitor as claimed in claim 13, wherein the electrically conducting polymer is selected from polyaniline, polyoxyphenylene, polyphenylene sulfide, polythiophene, polyfuran, polypyrrole, polymethylpyrrole, and substitution derivatives and copolymers thereof.

16. The chip solid electrolyte capacitor as claimed in claim 15, wherein the electrically conducting polymer is poly(3,4-ethylenedioxythiophene).

17. The chip solid electrolyte capacitor as claimed in claim 12, wherein the inorganic semiconductor is at least one compound selected from molybdenum dioxide, tungsten dioxide, lead dioxide and manganese dioxide.

18. The chip solid electrolyte capacitor as claimed in claim 2, wherein the electrical conductivity of the semiconductor is from 10^{-2} to 10^{3} S/cm.

19. A method for producing a chip solid electrolyte capacitor, comprising placing and connecting a plurality of solid electrolyte capacitor elements horizontally in parallel with no gap on a pair of oppositely disposed end parts of a lead frame, stacking a fixing layer which is extending across the plurality of capacitor elements and fixing the capacitor elements with each other, and molding the capacitor elements with a resin while leaving outside the external terminal parts of the lead frame, the solid electrolyte capacitor being produced by stacking an oxide dielectric film layer, a semiconductor layer and an electrically conducting layer in this order to form a cathode part on a surface of an anode substrate exclusive of the anode part at one end comprising a sintered body of a valve-acting metal or an electrically conducting oxide or comprising the sintered body connected with a metal wire.

20. An electronic circuit using the chip solid electrolyte capacitor described in any one of claims 1 to 18.

21. An electronic device using the chip solid electrolyte capacitor described in any one of claims 1 to 18.